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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,144	11/20/2003	Laurent De Volder	018789002-01	9004

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EXAMINER	
HINZE, LEO T	

ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,144	VOLDER, LAURENT DE	
	Examiner	Art Unit	
	Leo T. Hinze	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/101,895.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20031120*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: '28' in Fig. 8 and '29' in Figs. 9 and 10.

2. Figures 1-5 must be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

- Page 5, par 0024, line 1, "patterns" should be --systems--.
- Page 6, par 0025, line 1, "thixotropy" should be --thixotropic--.
- Page 10, par 0053, line 2 and par 0054, line 6, "pattern" should be --system--.

Appropriate correction is required.

Claim Objections

4. Claim 5 is objected to because of the following informalities: "one of the claims" in line 1 should be --claim--.

5. Claim 11 is objected to because of the following informalities: Claim 11 recites the limitation "the ink tank" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear how the claimed segments can be comprised in a disk. The segments (17) are truncated pie-shaped segments of a circular disk. Further regarding claim 5, the claim designates circular areas 24' and 24'' as disks, which is inconsistent with the specification, which describes the circular areas in a segment for two groups for tablets. Further regarding claim 5, the geometric relationship "segments are mutually adjacent two by two and/or radially separated from each other" is confusing. To expedite prosecution, the examiner will interpret the claim as claiming two areas in each segment.

Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Bachmann, US 5,456,170.

Bachmann teaches process for printing objects, in particular medical tablets, comprising a pad printing head (39, Fig. 4) that starts from the starting position, wherefrom the pad printing head is moved downwardly to take over a quantity of printing liquid, in particular ink, from a plate (51, Fig. 4) in an ink take-over position, after which the pad printing head loaded with ink is moved upwardly again into position, after which the pad printing head with the image take-over is moved forwardly until above the object to be printed in segment, wherein the ink tank (55, Fig. 4) is also moved simultaneously in the same direction forwardly so as to ink the image in the plate again, after which the pad printing head is moved downwardly to the object to be printed and deposits thereon the image taken over, after which the pad printing head is moved again in its initial position just like said ink tank (Fig. 4, col. 3, lines 38-43).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann, US 5,456,170 in view of Robbins, US 2,500,871.

Bachmann teaches an ink ball printing machine, including:

- printing apparatus for printing relatively small, light objects including medical tablets, having a certain brittleness and/or porosity comprising a movable print head, a printing liquid tank, wherein the print head is arranged in a linear pad printing system with a closed ink system (claim 1);

Bachmann does not teach:

- a conveyor unit supplying and discharging the objects to be printed to, respectively from the print head, with said conveyor unit including a rotating table having predetermined locations for receiving temporarily the objects during the printing stage (claim 1);
- wherein said rotating table is comprised of a table plate having a high smoothness whereupon a set of segments is provided which are able to float at a small height over said table plate, wherein said table plate and segments are plane (claim 2);
- wherein said segments are provided with holes which are realized in the segments wherein said objects to be printed fit so that their bottom side can get into contact with said table plate (claim 3).

Robbins teaches a machine for marking cylindrical objects, including:

- a conveyor unit (Figs. 1, 2, and 3) supplying and discharging the objects to be printed to, respectively from the print head, with said conveyor unit including a rotating table (1, Fig. 1) having predetermined locations (4, Fig. 1) for receiving temporarily the objects during the printing stage (claim 1);
- wherein said rotating table is comprised of a table plate (14, 15, Fig. 3) having a high smoothness whereupon a set of segments (1, Fig. 1) is provided which are able to float at a small height over said table plate, wherein said table plate and segments are plane (claim 2);
- wherein said segments are provided with holes (4, Figs. 1, 2) which are realized in the segments wherein said objects to be printed fit so that their bottom side can get into contact with said table plate (Fig. 5) (claim 3);
- that a rotary conveyor for supplying objects to and discharging objects from a printing station is advantageous in that it greatly increases the speed of operation and the output (col. 1, lines 29-38).

Regarding claims 1-3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bachmann to include a conveyor system with a rotary plate with holes for holding an object to be printed and a stationary plate just below the rotating plate, such that the objects rested on the stationary plate, because Robbins teaches that such a conveying system is advantageous for greatly increasing the speed of operation and the output of a printing machine.

12. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claims 1 and 2 above, and further in view of West, US 3,225,889.

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claims 1 and 2 above, except:

- wherein said segments are removable and mutually changeable, thereby having holes with different size and shape, which are adapted to the objects to be printed, wherein said holes are arranged according to a predetermined pattern in each segment (claim 4);
- wherein said segments are comprised in a disk, wherein the segments are mutually adjacent two by two and/or radially separated from each other (claim 5).

West teaches a machine with a rotary conveyor, including:

- wherein segments have holes with different size and shape (Figs. 5 and 8) , which are adapted to the objects to be manipulated, wherein said holes are arranged according to a predetermined pattern in each segment (claim 4);
- wherein said segments are comprised in a disk, wherein the segments are mutually adjacent two by two and/or radially separated from each other (claim 5);
- wedge sections (149, Fig. 5) are readily removed and replaced with substitute sections (col. 4, lines 69-72).
- that such a machine can be readily adapted to handle differently sized materials (col. 1, lines 24-28 and lines 46-50).

Regarding claims 4 and 5, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use segments with holes adapted to the objects to be printed, said holes arranged according to a predetermined pattern, wherein the segments are removable and mutually changeable, because West teaches that using mutually exchangeable, different segments with holes of different sizes is advantageous in that such a machine can be readily adapted to handle differently sized materials.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claims 1 and 2 above, and further in view of Ackley, US 4,672,892.

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claims 1 and 2 above, except a supply unit provided wherein the objects to be printed are stocked for being supplied on said rotating table, wherein a set of brushes are arranged in a brush casing which are provided at the outlet aperture of the supply unit and streaming downwardly therefrom, so that they can work as object separators over the segments for a substantially complete occupation of the holes therefrom.

Ackley teaches an apparatus for conveying and marking pellet-shaped objects, including a supply unit (11, Fig. 2) provided wherein the objects (10, col. 4, line 51) to be printed are stocked for being supplied on said rotating table, wherein a set of brushes (18, Fig. 2) are arranged in a brush casing which are provided at the outlet aperture of the supply unit and streaming downwardly therefrom, so that they can work as object separators over the segments for a substantially complete occupation of the holes therefrom (col. 4, lines 66-68). Ackley also that such an apparatus is advantageous in improving the efficiency in the handling of the articles

being imprinted (col. 2, lines 60-61), by ensuring that each aperture for holding an article is filled as it leaves the feed hopper (col. 1, line 67 through col. 2, line 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use a hopper and a brush to feed the articles to the conveyor, because Ackley teaches that such an apparatus is advantageous in improving the efficiency in the handling of the articles being imprinted, by ensuring that each aperture for holding an article is filled as it leaves the feed hopper.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claims 1 and 2 above, and further in view of Maerkedahl, US 5,343,997.

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claims 1 and 2 above, except a blow unit arranged streaming downwardly from the brush casing for blowing away waste objects to a receiving unit.

Maerkedahl teaches a conveying unit for feeding articles, including an air nozzle (60, Fig. 4) for blowing away incorrectly seated articles (col. 4, lines 47-52). Maerkedahl teaches that it an air nozzle is advantageous in helping ensure sufficient but not a surplus of quantities of articles are present when feeding a surplus of articles to the conveying system (col. 2, lines 4-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use a blow unit to blow away waste objects, because Maerkedahl teaches that a blow unit is advantageous in helping ensure sufficient but not a surplus of quantities of articles are present when feeding a surplus of articles to the conveying system.

15. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claim 1 above, and further in view of Rohwetter et al., US 5,456,169.

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claim 1 above, except a drying station provided streaming downwardly from the moveable print head for drying the printed objects.

Rohwetter teaches a printing machine (col. 9, lines 37-38) with a rotary conveyor (12, Fig. 1), including a drying station (XXIII, Fig. 1), where the ink applied to the article is dried.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to include a drying station, because Rohwetter teaches that drying stations are well-known in the art, and one having ordinary skill in the art would recognize the advantages of drying the ink on an article, such as preventing the ink from smearing or being applied to another article.

16. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Robbins as applied to claims 1 and 2 above, and further in view of Charlier et al., US 6,176,185 B1.

The combination of Bachmann and Robbins teaches all that is claimed as discussed in the rejection of claims 1 and 2 above, except:

- a vacuum chamber provided under the rotating table at the printing head for holding the objects during the printing operation by means of small holes in the table plate provided therefor (claim 9);

- wherein said vacuum aperture is arranged substantially centrally respective to the corresponding holes for the objects to be printed (claim 10).

Charlier et al. a method of printing on small articles, including using vacuum to hold the article and prevent it from sticking to the printing pad when the pad is lifted (col. 7, lines 5-12).

Regarding claims 9 and 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Bachmann to use vacuum from an aperture located under the article for holding the article, because Charlier et al. teach that vacuum is advantageous for preventing an object from sticking to the printing pad when the pad is lifted.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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